



3652

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	Before the Examiner
	)	
Markus Thurneysen et al.	)	Group Art Unit 3652
	)	
Serial No. 10/648,730	)	
	)	
Filed: August 22, 2003	)	
	)	
KINEMATIC DEVICE FOR SUPPORT	)	
AND PROGRAMMABLE	)	
DISPLACEMENT OF A TERMINAL	)	
ELEMENT IN A MACHINE OR AN	)	
INSTRUMENT	)	December 2, 2003

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure embodied in 37 CFR §1.56, Applicants wish to formally bring to the attention of the Examiner the following patents, publications and/or other information:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 2, 2003.

Clifford W. Browning  
Name of Registered Representative

Clifford W. Browning  
Signature

December 2, 2003  
Date of Signature

The references are listed on the attached Form 1449.

Copies of non-U.S. cited items are enclosed herewith.

The following are statements of relevance for all non-English-language references:

DE 195 25 482 (Richerzhagen Bernold)

This document discloses a supporting and driving structure with two rigid legs jointed at one end to guided members, the latter moving along a same line with respect to a fixed base. At their ends opposed to the base, the legs have a common joint. A tool (which is not specified and not described) is secured at the joining point of the legs. There is provided no auxiliary structure for pivoting the terminal element, and the property of angular stiffness tracking is not disclosed nor even suggested.

WO 97/22436 (Weikert Sascha; Wiegand Alexander Konrad (DE))

The English abstract summarizes the main features of the device disclosed in this document, i.e., the document discloses a base (2), a support and a drive structure with six legs (4a, b, c, d, e, f), a platform (1), a terminal element (tool) integral with the platform. On the base, six guided members (6a, b, c, d, e, f) permit to displace the platform according to six degrees of freedom. There is no distinct portion of the support and drive structure acting as an auxiliary structure able to command pivoting movements about an axis belonging to the platform. The property of angular stiffness tracking is not fulfilled and is neither disclosed nor suggested.

DE 196 11 130 (VDW Verein Deutscher Werkzeugm)

This document discloses different devices comprising means for supporting and driving a platform (P) with respect to a base (D) by means of legs connected to guided members and to the platform. According to figure 6, three legs, formed of parallelograms with joints at their angles, are connected through joints to three guided members moving on parallel guide ways. In order to fulfill movements of rotation, there is provided telescope means elongating or shortening certain sides of the parallelograms (Figs. 7, 8, 9) or rotating means between the guided members (A1, A2, A3) and the side bars of the parallelograms (Figs. 10, 11, 12), or still other means. There is provided no distinct auxiliary structure having a rigid drive element for transmitting the resultant force to the platform and the property of angular stiffness tracking is neither disclosed nor suggested in this document.

DE 197 19 171 (Hesselbach Juergen Prof. Dr. Ing.)

This document discloses an arrangement comprising a base (1, 2), a support and drive structure with three legs (18, 19, 20) and a platform (24) arranged to receive a tool as terminal element. Each leg is driven by two guided members (9, 10; 11, 12; 13, 14), each of said guided members having two degrees of freedom (rotation and linear displacement). Each of the legs controls a pivoting movement of the platform, however this needs a displacement of a plurality of guided members, with each one utilizing more than one degree of freedom. Further, the property of angular stiffness tracking is not fulfilled. This property is not expressed nor even suggested.

WO 99/08832 (Baldini Guido; Rutz Daniel (CH); Mikron SA Agno (CH); Zirn Oliver)

The English abstract summarizes the main features of the device disclosed in this document, i.e., a base (20), a support and drive structure (6, 2, 4), a platform (10), a terminal element (40), guided members with only one degree of freedom (12, 14, 16). Leg 6 has the function of an auxiliary structure for pivoting the platform (10) about axis 42. The property of angular stiffness tracking is not stated in this document, neither is this property fulfilled in the embodiments described. It must also be noted that the pivoting axis (42) of the terminal element (40) does not belong to the platform (common joint axis 42 of legs 2 and 4).

WO 99/32256 (Lehmann Fritz; Liechti Ralph (CH); Liechti Engineering AG (CH))

The English abstract summarizes the main features of the device disclosed in this document, i.e., the document discloses a base (3), a support and drive structure with three legs (11, 12, 13), a platform (17), a terminal element (18), guided members (5, 6, 7), each having only one degree of freedom. Leg 11 constitutes an auxiliary structure for pivoting the platform (17) about a (virtual) axis belonging to the platform. This device lacks of any transmission means fulfilling the property of angular stiffness tracking, said property being neither disclosed nor suggested.

DE 198 39 366 (Pritschow Guenter)

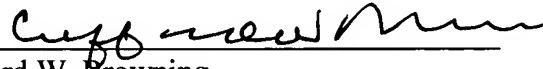
This document discloses a device comprising a base (3), a support structure (16, 10, 11, 12) having a mere guiding function, a platform (1) which can have the function of a tool. For driving the structure and displacing the platform, a further structure is needed (telescope motors 2) and still other motors (40 in Fig. 2) are necessary for pivoting the platform. The

problem of angular stiffness tracking is entirely irrelevant in the problematic of this prior document.

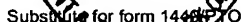
The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b).

No fee is believed to be due, however, should any fee be required, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted

By:   
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Sheet	2	of	2
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**Complete if Known**

Application Number	10/648,730
Filing Date	August 22, 2003
First Named Inventor	M. Thurneysen
Art Unit	3652
Examiner Name	
Attorney Docket Number	16873-2

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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> ~Number <sup>4</sup> ~Kind Code <sup>5</sup> (if known)				
		WO 99/32256	07-01-1999	Liechti Engineering		
		DE 19839366 A1	03-02-2000	Pritschow		

**Examiner  
Signature**

Date  
Considered

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC 20231.**

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Substitute for form

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

Sheet	1	of	2
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**Complete if Known**

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Attorney Docket Number	16873-2

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY			
		GB 2295601 A	06-05-1996	Toyoda Koki		
		DE 19525482 A1	01-16-1997	Richerzhagen		
		WO 97/22436	06-26-1997	Wiegand		
		DE 19611130 A1	09-25-1997	VDW Verein		
		DE 19710171 A1	09-17-1998	Hesselbach		
		WO 99/08832	02-25-1999	Mikron SA		

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC 20231.**

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